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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|------------------------|------------------|
| 10/604,177 | 06/30/2003 | Anthony R Bonaccio | BUR920020059US1 | 1176 |
| 30449 7590 04/03/2007 SCHMEISER, OLSEN & WATTS 22 CENTURY HILL DRIVE SUITE 302 LATHAM, NY 12110 | | | EXAMINER KIM, KEVIN | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2611 | |
| SHORTENED STATUTORY PERIOD OF RESPONSE | | MAIL DATE | DELIVERY MODE | |
| 3 MONTHS | | 04/03/2007 | PAPER | |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/604,177

Applicant(s)

BONACCIO ET AL.

Examiner

Kevin Y. Kim

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-30 and 35-44 is/are allowed.
- 6) ☒ Claim(s) 9-16, 31-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 9-16, 3132 and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Santos et al (US 5,119,399).

Claim 9.

Santos et al discloses a phase adjustable clock circuit comprising:

means (13,15) for generating a first clock signal (Ic) and a second clock signal (Qc); and a first phase adjustment circuit (17) that receives said first clock signal and that generates a third clock signal from said first clock signal and a second phase adjustment circuit (21) that receives said second clock signal and that generates a fourth clock signal, wherein at least one of said third and said fourth clock signals differ in phase from said first and said second clock signal respectively.

Claim 10.

The phases of said first and second clock signals are 90 degrees apart. See the signal splitter (15).

Claim 11.

Art Unit: 2611

Since the amount of phase shift is arbitrary (see col.4, line 45), there is a case wherein the phase of said third clock signal differs in a phase range of ± 90 degrees from the phase of said first clock signal and the phases of the second clock signal and fourth clock signals are the same.

Claim 12.

Since the amount of phase shift is arbitrary (see col.4, line 45), there is a case wherein the center of the phase range of said third clock signal is offset ± 90 degrees from the phase of said fourth clock signal.

Claim 13.

The phase shifter (60,61) responds to a control voltage signal from Phase (60,61) respectively, thus the phase difference between said first clock signal and said third clock signal is a function of the magnitude of the control voltage applied to said first phase adjustment circuit.

Claim 14.

Since the amount of phase shift is arbitrary (see col.4, line 45), there is a case wherein the phase of said third clock signal differs in a phase range of ± 90 degrees from the phase of said first clock signal and the phase of said fourth clock signal differs in a phase range of ± 90 degrees from the phase of said second clock signal.

Claim 15.

Since the amount of phase shift is arbitrary (see col.4, line 45), there is a case wherein the center of the phase range of said third clock signal is ± 90 degrees from the center of the phase range of said fourth clock signal.

Claim 16.

Since the amount of phase shift is arbitrary (see col.4, line 45), there is a case wherein an amount of phase difference between said first and third clock signals is the same as an amount of phase difference between said second and fourth clock signals and is a function of the magnitude and polarity of a control voltage applied to both said first and second phase adjustment circuits.

Claim 31.

See the means for generating said first and second clock signals comprises an oscillator (13).

Claim 32.

Fig.1 shows that the phase adjustment of said third clock signal is a function of the magnitude and polarity of a first control signal (from Phase 60) applied to said first phase adjustment circuit and wherein the amount of phase adjustment of said fourth clock signal is a function of the magnitude and polarity of a second control signal (from Phase 61) applied to said second phase adjustment circuit.

Claim 34.

Art Unit: 2611

Since the amount of phase shift is arbitrary (see col.4, line 45), there is a case wherein said first and second control signals are the same control signal.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Santos et al, as applied to claim 32 above.

Santos et al teach all the subject matter claimed but for the control signals to the phase shifters are differential. However, the use of a differential signal is well known in the art for its benefit of improved quality. Thus it would have been obvious to one skilled in the art at the time the invention was made to use differential signals as a control signal to the phase shifters since the differential signals are less subject to noise.

Allowable Subject Matter

5. Claims 17-30, 35-44 are allowed.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

Art Unit: 2611

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Y. Kim whose telephone number is 571-272-3039. The examiner can normally be reached on 8AM --5PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

March 30, 2007

A handwritten signature in black ink, appearing to be 'Kevin Y. Kim', written in a cursive style.